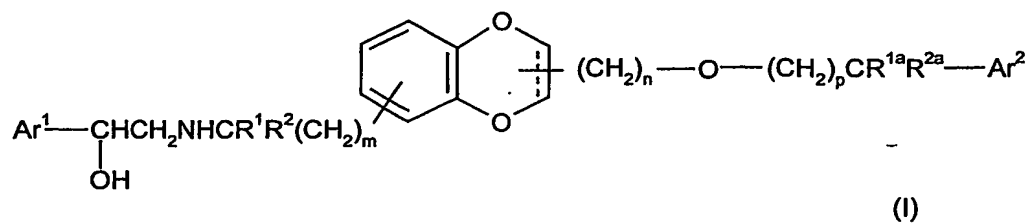


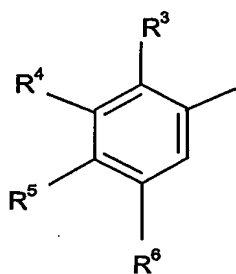
CLAIMS

1. A compound of formula (I):

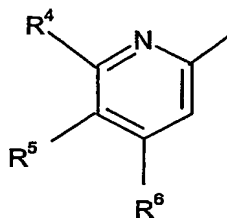


or a salt, solvate, or physiologically functional derivative thereof, wherein:

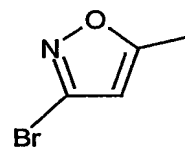
Ar¹ is a group selected from



(a)

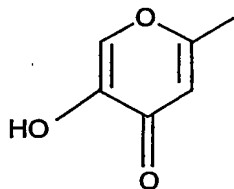


(b)



(c)

and



(d)

wherein R⁴ represents hydrogen, halogen, $-(\text{CH}_2)_q\text{OR}^7$, $-\text{NR}^7\text{C}(\text{O})\text{R}^8$, $-\text{NR}^7\text{SO}_2\text{R}^8$, $-\text{SO}_2\text{NR}^7\text{R}^8$, $-\text{NR}^7\text{R}^8$, $-\text{OC}(\text{O})\text{R}^9$ or $\text{OC}(\text{O})\text{NR}^7\text{R}^8$,
and R³ represents hydrogen, halogen or C₁₋₄ alkyl;

or R^4 represents $-NHR^{10}$ and R^3 and $-NHR^{10}$ together form a 5- or 6- membered heterocyclic ring;

R^5 represents hydrogen, halogen, $-OR^7$ or $-NR^7R^8$;

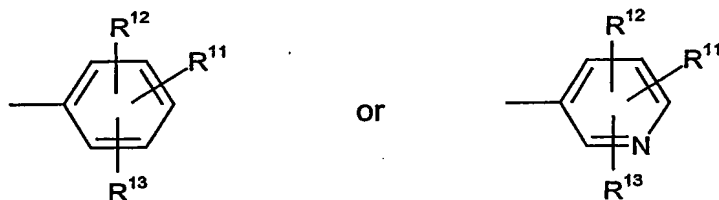
R^6 represents hydrogen, halogen, halo C_{1-4} alkyl, $-OR^7$, $-NR^7R^8$, $-OC(O)R^9$ or $OC(O)NR^7R^8$;

R^7 and R^8 each independently represents hydrogen or C_{1-4} alkyl, or in the groups $-NR^7R^8$, $-SO_2NR^7R^8$ and $-OC(O)NR^7R^8$, R^7 and R^8 independently represent hydrogen or C_{1-4} alkyl or together with the nitrogen atom to which they are attached form a 5-, 6- or 7- membered nitrogen-containing ring,

R^9 represents an aryl (eg phenyl or naphthyl) group which may be unsubstituted or substituted by one or more substituents selected from halogen, C_{1-4} alkyl, hydroxy, C_{1-4} alkoxy or halo C_{1-4} alkyl; and

q is zero or an integer from 1 to 4;

Ar^2 is a group:



wherein

R^{11} is selected from hydrogen, C_{1-6} alkyl, hydroxy, C_{1-6} alkoxy, cyano, nitro, halo, C_{1-6} haloalkyl, XCO_2R^{16} , $-XC(O)NR^{15}R^{16}$, $-XNR^{14}C(O)R^{15}$, $-XNR^{14}C(O)NR^{15}R^{16}$, $-XNR^{14}C(O)NC(O)NR^{15}R^{16}$, $-XNR^{14}SO_2R^{15}$, $-XSO_2NR^{17}R^{18}$, XSR^{14} , $XSOR^{14}$, XSO_2R^{14} , $-XNR^{15}R^{16}$, $-XNR^{14}C(O)OR^{15}$, or $XNR^{14}SO_2NR^{15}R^{16}$,
or R^{11} is selected from $-X$ -aryl, $-X$ -hetaryl, or $-X$ -(aryloxy), each optionally substituted by 1 or 2 groups independently selected from hydroxy, C_{1-6} alkoxy, halo, C_{1-6} alkyl, C_{1-6} haloalkyl, cyano, nitro, $CONR^{15}R^{16}$,

$-\text{NR}^{14}\text{C}(\text{O})\text{R}^{15}$, SR^{14} , SOR^{14} , $-\text{SO}_2\text{R}^{14}$, $-\text{SO}_2\text{NR}^{17}\text{R}^{18}$, $-\text{CO}_2\text{R}^{16}$, $-\text{NR}^{15}\text{R}^{16}$, or hetaryl optionally substituted by 1 or 2 groups independently selected from hydroxy, C_{1-6} alkoxy, halo, C_{1-6} alkyl, or C_{1-6} haloalkyl;

X is $-(\text{CH}_2)_r-$ or C_{2-6} alkenylene;

r is an integer from 0 to 6, preferably 0 to 4;

R^{14} and R^{15} are independently selected from hydrogen, C_{1-6} alkyl, C_{3-7} cycloalkyl, aryl, hetaryl, hetaryl(C_{1-6} alkyl)- and aryl(C_{1-6} alkyl)- and R^{14} and R^{15} are each independently optionally substituted by 1 or 2 groups independently selected from halo, C_{1-6} alkyl, C_{3-7} cycloalkyl, C_{1-6} alkoxy, C_{1-6} haloalkyl, $-\text{NHC}(\text{O})(\text{C}_{1-6}\text{alkyl})$, $-\text{SO}_2(\text{C}_{1-6}\text{alkyl})$, $-\text{SO}_2(\text{aryl})$, $-\text{CO}_2\text{H}$, and $-\text{CO}_2(\text{C}_{1-4}\text{alkyl})$, $-\text{NH}_2$, $-\text{NH}(\text{C}_{1-6}\text{alkyl})$, aryl($\text{C}_{1-6}\text{alkyl})$ -, aryl(C_{2-6} alkenyl)-, aryl(C_{2-6} alkynyl)-, hetaryl($\text{C}_{1-6}\text{alkyl})$ -, $-\text{NHSO}_2\text{aryl}$, $-\text{NH}(\text{hetarylC}_{1-6}\text{alkyl})$, $-\text{NHSO}_2\text{hetaryl}$, $-\text{NHSO}_2(\text{C}_{1-6}\text{alkyl})$, $-\text{NHC}(\text{O})\text{aryl}$, or $-\text{NHC}(\text{O})\text{hetaryl}$;

or R^{14} and R^{15} , together with the nitrogen atom to which they are bonded, form a 5-, 6- or 7-membered nitrogen – containing ring;

or where R^{11} is $-\text{XNR}^{14}\text{C}(\text{O})\text{NR}^{15}\text{R}^{16}$, R^{14} and R^{15} may, together with the $-\text{NC}(\text{O})\text{N}-$ portion of the group R^1 to which they are bonded, form a saturated or unsaturated ring, preferably a 5-, 6-, or 7- membered ring, for example an imidazolidine ring, such as imidazolidine-2,4-dione;

or where R^{11} is $-\text{XNR}^{14}\text{C}(\text{O})\text{OR}^{15}$, R^{14} and R^{15} may, together with the $-\text{NC}(\text{O})\text{O}-$ portion of the group R^1 to which they are bonded, form a saturated or unsaturated ring, preferably a 5-, 6-, or 7- membered ring, for example an oxazolidine ring, such as oxazolidine-2,4-dione;

R^{16} is selected from hydrogen, C_{1-6} alkyl and C_{3-7} cycloalkyl;

or where R^{11} is $-\text{XC}(\text{O})\text{NR}^{15}\text{R}^{16}$ or $-\text{XNR}^{14}\text{C}(\text{O})\text{NR}^{15}\text{R}^{16}$, R^{15} and R^{16} may, together with the nitrogen to which they are bonded, form a 5-, 6-, or 7- membered nitrogen containing ring;

R^{17} and R^{18} are independently selected from hydrogen, C_{1-6} alkyl, C_{3-7} cycloalkyl, aryl, hetaryl, hetaryl(C_{1-6} alkyl)- and aryl(C_{1-6} alkyl)-, or R^{17} and R^{18} , together with the nitrogen to which they are bonded, form a 5-, 6-, or 7- membered nitrogen containing ring;

and R^{17} and R^{18} are each optionally substituted by one or two groups independently selected from halo, C_{1-6} alkyl, and C_{3-7} cycloalkyl, C_{1-6} haloalkyl;

R^{12} is selected from hydrogen, hydroxy, C_{1-6} alkyl, C_{1-6} alkoxy, halo, aryl, aryl(C_{1-6} alkyl)-, C_{1-6} haloalkoxy, and C_{1-6} haloalkyl;

R^{13} is selected from hydrogen, hydroxy, C_{1-6} alkyl, C_{1-6} alkoxy, halo, aryl, aryl(C_{1-6} alkyl)-, C_{1-6} haloalkoxy, and C_{1-6} haloalkyl;

R^1 and R^2 are independently selected from hydrogen and C_{1-4} alkyl with the proviso that the total number of carbon atoms in R^1 and R^2 is not more than 4;

one of R^{1a} and R^{2a} is selected from hydrogen and C_{1-4} alkyl, and the other of R^{1a} and R^{2a} represents C_{1-4} alkyl;

m is an integer of from 1 to 3;

n is an integer of from 1 to 4; and

p is zero or an integer of from 1 to 3;

and represents a single or double bond.

2. A compound of formula (I) as defined in claim 1, or a salt, solvate or physiologically functional derivative thereof, except that:

R^{1a} and R^{2a} each represent hydrogen;

and in the group Ar^1 , either:

R^4 represents halogen, $-(CH_2)_qOR^7$, $-NR^7C(O)R^8$, $-NR^7SO_2R^8$, $-SO_2NR^7R^8$, $-NR^7R^8$, $-OC(O)R^9$ or $OC(O)NR^7R^8$, and R^3 represents hydrogen or C_{1-4} alkyl;

or:

R^4 represents $-NHR^{10}$ and R^3 and $-NHR^{10}$ together form a 5- or 6- membered heterocyclic ring;

3. A compound of formula (I) according to either claim 1 or claim 2 wherein the group Ar^1 is selected from groups (a) and (b) as defined in claim 1.

4. A compound of formula (I) according to any of claims 1 to 3 wherein, in the group Ar^2 , R^{11} is selected from hydrogen, C_{1-4} alkyl, hydroxy, halo, $-NR^{14}C(O)NR^{15}R^{16}$,

$-\text{NR}^{14}\text{SO}_2\text{R}^{15}$ and $\text{XSO}_2\text{NR}^{17}\text{R}^{18}$ wherein R^{14} to R^{18} are as defined in claim 1.

5. A compound of formula (I) according to any of claims 1 to 3 wherein, in the group Ar^2 , R^{11} is selected from cyano, $-\text{CONR}^{15}\text{R}^{16}$, SR^{14} , SOR^{14} and SO_2R^{14} , wherein R^{14} , R^{15} and R^{16} are as defined in claim 1.
6. A compound of formula (I) according to any of claims 1 to 5 wherein R^{12} and R^{13} each represent hydrogen.
7. A compound of formula (I) according to any of claims 1 to 3 wherein R^{11} represents hydrogen and R^{12} and R^{13} each represent halogen or C_{1-6} alkyl.
8. A compound of formula (I) according to any of claims 1 to 7 wherein R^1 and R^2 are both hydrogen.
9. A compound of formula (I) according to any of claims 1 to 8 wherein each of m and n is independently 1 or 2, and p is zero or 1.
10. A compound of formula (I) selected from:
 - 4-((1*R*)-2-[[2-((3*R*)-3-[(2,6-Dichlorobenzyl)oxy]methyl)-2,3-dihydro-1,4-benzodioxin-6-yl)ethyl]amino)-1-hydroxyethyl)-2-(hydroxymethyl)phenol;
 - 4-((1*R*)-2-[[2-((3*R*)-3-[(Benzyloxy)methyl]-2,3-dihydro-1,4-benzodioxin-6-yl)ethyl]amino]-1-hydroxyethyl)-2-(hydroxymethyl)phenol;
 - 4-((1*R*)-2-[[2-((3*S*)-3-[(Benzyloxy)methyl]-2,3-dihydro-1,4-benzodioxin-6-yl)ethyl]amino]-1-hydroxyethyl)-2-(hydroxymethyl)phenol;
 - 2-(Hydroxymethyl)-4-((1*R*)-1-hydroxy-2-[[2-((3*R*)-3-[(pyridin-3-ylmethoxy)methyl]-2,3-dihydro-1,4-benzodioxin-6-yl)ethyl]amino]ethyl)phenol;
 - 4-((1*R*)-2-[[2-((3*R*)-3-[(6-Chloropyridin-3-yl)methoxy]methyl)-2,3-dihydro-1,4-benzodioxin-6-yl)ethyl]amino)-1-hydroxyethyl)-2-(hydroxymethyl)phenol;
 - 4-((1*R*)-2-[[2-((3*R*)-3-[(2,6-Dichloropyridin-3-yl)methoxy]methyl)-2,3-dihydro-1,4-benzodioxin-6-yl)ethyl]amino)-1-hydroxyethyl)-2-(hydroxymethyl)phenol;
 - 4-((1*R*)-2-[[2-((3*R*)-3-[(Benzyloxy)methyl]-2,3-dihydro-1,4-benzodioxin-6-yl)ethyl]amino]-1-hydroxyethyl)-2-(hydroxymethyl)phenol;
 - 4-((1*R*)-2-[[2-((3*R*)-3-[(5-Bromopyridin-3-yl)methoxy]methyl)-2,3-dihydro-1,4-benzodioxin-6-yl)ethyl]amino)-1-hydroxyethyl)-2-(hydroxymethyl)phenol;

3-(((2R)-7-[2-(((2R)-2-Hydroxy-2-[4-hydroxy-3-(hydroxymethyl)phenyl]ethyl)amino)ethyl]-2,3-dihydro-1,4-benzodioxin-2-yl)methoxy)methyl]benzonitrile;

3-(((2R)-7-[2-(((2R)-2-Hydroxy-2-[4-hydroxy-3-(hydroxymethyl)phenyl]ethyl)amino)ethyl]-2,3-dihydro-1,4-benzodioxin-2-yl)methoxy)methyl]benzamide;

4-[(1R)-2-((2-[(3R)-3-((3-(Cyclopentylthio)benzyl)oxy)methyl]-2,3-dihydro-1,4-benzodioxin-6-yl)ethyl)amino)-1-hydroxyethyl]-2-(hydroxymethyl)phenol;

4-[(1R)-2-((2-[(3R)-3-((3-(Cyclopentylsulfonyl)benzyl)oxy)methyl]-2,3-dihydro-1,4-benzodioxin-6-yl)ethyl)amino)-1-hydroxyethyl]-2-(hydroxymethyl)phenol;

2-(Hydroxymethyl)-4-[(1R)-1-hydroxy-2-((2-[(3R)-3-((5-[4-(methylsulfinyl)phenyl]pyridin-3-yl)methoxy)methyl]-2,3-dihydro-1,4-benzodioxin-6-yl)ethyl)amino)ethyl]phenol;

N-[3-(((2R)-7-[2-(((2R)-2-Hydroxy-2-[4-hydroxy-3-(hydroxymethyl)phenyl]ethyl)amino)ethyl]-2,3-dihydro-1,4-benzodioxin-2-yl)methoxy)methyl]phenyl]urea;

4-((1R)-2-((2-[(3R)-3-((4-Chlorobenzyl)oxy)methyl]-2,3-dihydro-1,4-benzodioxin-6-yl)ethyl)amino)-1-hydroxyethyl)-2-(hydroxymethyl)phenol;

4-((1R)-2-((2-[(3R)-3-((4-Fluorobenzyl)oxy)methyl]-2,3-dihydro-1,4-benzodioxin-6-yl)ethyl)amino)-1-hydroxyethyl)-2-(hydroxymethyl)phenol;

4-((1R)-2-((2-[(3R)-3-((3,5-Dimethylbenzyl)oxy)methyl]-2,3-dihydro-1,4-benzodioxin-6-yl)ethyl)amino)-1-hydroxyethyl)-2-(hydroxymethyl)phenol;

2-(Hydroxymethyl)-4-[(1R)-1-hydroxy-2-((2-[(3R)-3-((1-phenylethoxy)methyl]-2,3-dihydro-1,4-benzodioxin-6-yl)ethyl)amino)ethyl]phenol;

2-(Hydroxymethyl)-4-[(1R)-1-hydroxy-2-((2-[(3R)-3-((3-(methylsulfonyl)benzyl)oxy)methyl]-2,3-dihydro-1,4-benzodioxin-6-yl)ethyl)amino)ethyl]phenol;

4-((1R)-2-((2-[(3R)-3-((3-(2,6-Dichlorophenyl)propoxy)methyl]-2,3-dihydro-1,4-benzodioxin-6-yl)ethyl)amino)-1-hydroxyethyl)-2-(hydroxymethyl)phenol;

3-(((2R)-7-[2-(((2R)-2-Hydroxy-2-[4-hydroxy-3-(hydroxymethyl)phenyl]ethyl)amino)ethyl]-2,3-dihydro-1,4-benzodioxin-2-yl)methoxy)methyl]benzenesulfonamide;

6-[2-[(2-[(3R)-3-((Benzyloxy)methyl]-2,3-dihydro-1,4-benzodioxin-6-yl)ethyl)amino]-1-hydroxyethyl]-2-(hydroxymethyl)pyridin-3-ol;

N-(5-[(1R)-2-[(2-[(3R)-3-((Benzyloxy)methyl]-2,3-dihydro-1,4-benzodioxin-6-yl)ethyl)amino]-1-hydroxyethyl)-2-hydroxyphenyl)methanesulfonamide;

4-[(1R)-2-[(2-[(3R)-3-((Benzyloxy)methyl]-2,3-dihydro-1,4-benzodioxin-6-yl)ethyl)amino]-1-hydroxyethyl]-2-fluorophenol;

4-[(1R)-2-[(2-[(3R)-3-((Benzyloxy)methyl]-2,3-dihydro-1,4-benzodioxin-6-yl)ethyl)amino]-1-hydroxyethyl]-3-methylphenol;

(1R)-1-(4-Amino-3,5-dichlorophenyl)-2-[(2-[(3R)-3-((benzyloxy)methyl]-2,3-dihydro-1,4-benzodioxin-6-yl)ethyl)amino]ethanol;

5-[(1*R*)-2-[(2-[(3*R*)-3-[(Benzyloxy)methyl]-2,3-dihydro-1,4-benzodioxin-6-yl)ethyl)amino]-1-hydroxyethyl]-2-hydroxyphenyl]formamide;

or a salt, solvate or physiologically functional derivative thereof.

11. A method for the prophylaxis or treatment of a clinical condition in a mammal, such as a human, for which a selective β_2 -adrenoreceptor agonist is indicated, which comprises administration of a therapeutically effective amount of a compound of formula (I) according to any of claims 1 to 10, or a pharmaceutically acceptable salt, solvate, or physiologically functional derivative thereof.

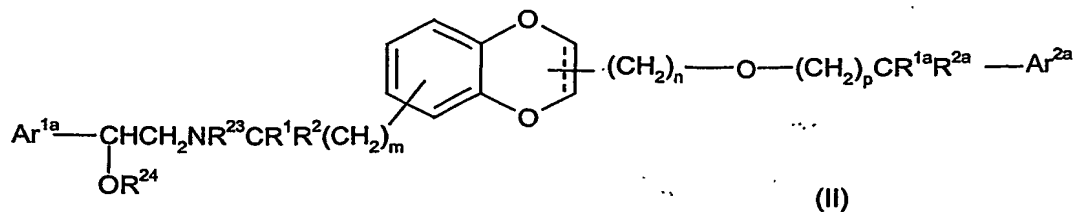
12. A compound of formula (I) according to any of claims 1 to 10, or a pharmaceutically acceptable salt, solvate, or physiologically functional derivative thereof for use in medical therapy.

13. A pharmaceutical formulation comprising a compound of formula (I) according to any of claims 1 to 10, or a pharmaceutically acceptable salt, solvate, or physiologically functional derivative thereof, and a pharmaceutically acceptable carrier or excipient, and optionally one or more other therapeutic ingredients.

14. The use of a compound of formula (I) according to any of claims 1 to 10, or a pharmaceutically acceptable salt, solvate, or physiologically functional derivative thereof in the manufacture of a medicament for the prophylaxis or treatment of a clinical condition for which a selective β_2 -adrenoreceptor agonist is indicated.

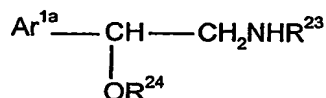
15. A process for the preparation of a compound of formula (I), according to any of claims 1 to 10, or a salt, solvate, or physiologically functional derivative thereof, which comprises:

(a) deprotection of a protected intermediate, for example of formula (II).



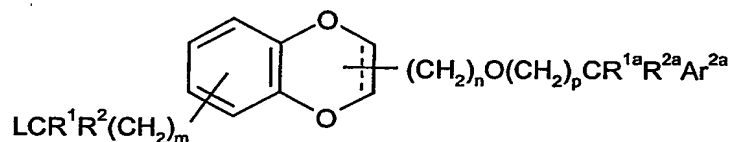
or a salt or solvate thereof, wherein R^1 , R^2 , R^{1a} , R^{2a} , m , n , p and --- are as defined for the compound of formula (I), Ar^{1a} represents an optionally protected form of Ar^1 ; Ar^{2a} represents an optionally protected form of Ar^2 and R^{23} and R^{24} are each independently either hydrogen or a protecting group, provided that the compound of formula (II) contains at least one protecting group;

(b) alkylation of an amine of formula



(VIII)

wherein Ar^{1a} , R^{23} and R^{24} are as defined for formula (II) with a compound of formula (XV):



(XV)

wherein --- , Ar^2 , R^1 , R^2 , R^{1a} , R^{2a} , m , n and p are as defined for the compound of formula (II) and L is a leaving group as defined for formula (IX);

followed by the following steps in any order:

- (i) optional removal of any protecting groups;
- (ii) optional separation of an enantiomer from a mixture of enantiomers;
- (iii) optional conversion of the product to a corresponding salt, solvate, or physiologically functional derivative thereof.